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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/442,187	11/16/1999	BRUNN WALL ROYSDEN JR.	81127.002	5513

7590 05/30/2003  
FENNEMORE CRAIG  
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Phoenix, AZ 85012

EXAMINER

COLILLA, DANIEL JAMES

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 05/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/442,187

Applicant(s)

ROYSDEN, BRUNN WALL

Examiner

Dan Colilla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 37-68 is/are allowed.
- 6) ☐ Claim(s) 10,14-17,19,23-26,28 and 32-34 is/are rejected.
- 7) ☒ Claim(s) 11-13,18,20-22,27,29-31,35 and 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 10, 16, 28 and 33-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Bullister.

With respect to claims 10 and 28, Bullister discloses a keyboard 12 including a keyboard structure 16,18,20,22, a plurality of keys 32, each key having its own structure and a computer component 26 (display element) which is disposed between at least two keys as shown in Figure 2 of Bullister.

With respect to claim 16, Bullister discloses that the computer component is a display element 26 which is an output means for displaying data from a computer.

With further respect to claim 28, although not shown in the Figures of Bullister, there must be some structure supporting the keys 32 in the keyboard parts 16 and 18. The keys 32 define a space in which the display 24 is centrally located.

With respect to claim 33, to the extent that applicant has defined “passive component” the display is a passive component.

With respect to claim 34, the display disclosed by Bullister is an output means.

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3. Claims 10, 15, 19 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Weeks.

With respect to claims 10 and 19, Weeks discloses a keyboard 10 with a plurality of keys 23,24 held in a keyboard structure, each key having a structure and a computer component 21 (microphone) which is disposed between keys 23 and 24. Weeks discloses that the keyboard is for use with a computer which inherently includes a central processing unit.

With respect to claims 15 and 24, to the extent that applicant has defined “passive component” the microphone 21 is a passive component.

4. Claims 10, 16-17, 19 and 25-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishizawa et al.

With respect to claims 10 and 19, Ishizawa et al. discloses a keyboard 10 with a keyboard structure and a plurality of keys 3 having structure, output means 4, and a computer component 15 (parabola antenna) which is disposed between at least the top-most keys in key sections 30 and 30A as shown in Figure 2 of Ishizawa et al.

With respect to claims 16-17 and 25-26, Ishizawa et al. discloses that the antenna 15 serves as a transmitter-receiver for communicating with a large-capacity computer system 16 (col. 8, lines 13-26).

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***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 14 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weeks in view of Stoffel et al.

With respect to claims 14 and 23, Weeks discloses the claimed keyboard and computer system except that it is not known to the examiner if an integrated circuit is included with the microphone mounted in the keyboard. However Stoffel et al. teaches that it is known to manufacture a microphone and an integrated circuit on the same chip (Stoffel et al., col. 1, lines 19-23). It would have been obvious to combine the teaching of Stoffel et al. with the computer and keyboard disclosed by Weeks for the advantage of improving the signal to noise ratio of the microphone.

7. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bullister as applied to claims 10, 16, 28 and 33-34 above, and further in view of Hirakata.

Bullister discloses the claimed keyboard as mentioned above except that it is not known to the examiner if the display includes an integrated circuit. However, Hirakata teaches a display that includes an integrated circuit (Hirakata, pg. 1, paragraphs 4-8). It would have been obvious to combine the teaching of Hirakata with the keyboard disclosed by Bullister for the

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miniaturization and simplified structure allowed by the combination of display and integrated circuit.

*Allowable Subject Matter*

8. Claims 37-68 are allowed.

9. Claims 11-13, 18, 20-22, 27, 29-31 and 35-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

Claims 11-13, 18, 20-22, and 27 have been indicated as containing allowable subject matter because the prior art of record does not disclose or teach in combination the entire combination of a keyboard including a computer component, as defined by applicant, other than a keyboard component, as defined by applicant, that is at least partly disposed between the key structures of the keys on the keyboard in which the computer component is a power means or data storage means.

Claims 29-31 and 35-36 have been indicated as containing allowable subject matter because the prior art of record does not disclose or teach in combination the entire combination of a keyboard including a key structure, key cap, a computer component, as defined by applicant, other than a keyboard component, as defined by applicant, that is disposed in a section of key

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space, as defined by applicant, in which the computer component is a power means, a remote access means or a means for storing data.

Claims 37-52 have been indicated as containing allowable subject matter because the prior art of record does not disclose or teach in combination the entire combination of a keyboard including a plurality of keys, such that each key has a key structure and a key cap; and a section undepressed key capless key space, as defined by applicant, such that a computer component, as defined by applicant, is at least partly disposed in the section of undepressed key capless key space and is mounted to a surface facing the plurality of keys and such that the computer component is not a keyboard component as defined by applicant.

Claims 53-68 have been indicated as containing allowable subject matter because the prior art of record does not disclose or teach in combination the entire combination of a keyboard including a plurality of keys, such that each key has a key structure and a key cap; and a bounding key set undepressed key capless space, as defined by applicant, such that a computer component, as defined by applicant, is at least partly disposed in the bounding key set undepressed key capless space such that the computer component is not a keyboard component as defined by applicant.

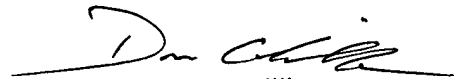
### ***Response to Arguments***

11. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Colilla whose telephone number is (703) 308-2259. The examiner can normally be reached M-F, 8:30-5:30. Faxes regarding this application can be sent to (703) 746-4405.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached at (703)305-6619. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Dan Colilla  
Primary Examiner  
Art Unit 2854

May 27, 2003